



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/644,932

08/21/2003

Dominique Gauthier

86503-76

7374

28291 7590 02/12/2009  
SMART & BIGGAR  
1000 DE LA GAUCHETIERE ST. W.  
SUITE 3300  
MONTREAL, QC H3B 4W5  
CANADA

EXAMINER

RUSSELL, WANDA Z

ART UNIT

PAPER NUMBER

2416

MAIL DATE

DELIVERY MODE

02/12/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



## DETAILED ACTION

### *Claim Objections*

1. Claims 1, and 6-9 objected to because of the following informalities:

It is noted, with respect to claim 1, that the language used by applicants merely suggests or makes optional those features described as “operable to”; such language does not require steps to be performed nor limits the claim to a particular structure.

The manner of operating the device does not differentiate apparatus claim from the prior art. See MPEP 2114.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. **Claims 1-24, 27, 30-32, and 34-40** are rejected under 35 U.S.C. 102(b) as being anticipated by Han et al. (U.S. Patent 6,430,200 B1).

For **claims 1, 10, 17, 27, 30, and 35**, Han et al. teach a device (apparatus, see Title), a method (see Title), a system (see Fig. 2), and a base station (see Fig. 2, and col. 4, lines 15-17 for description of Fig. 2. Fig. 2 is a base station) for integration into a base station of a type that includes at least one radio-transceiver (see 300, 310, and 330 in Fig. 2) for receiving and transmitting radio communications (see Fig. 2) to a

plurality of subscriber stations (see output #1 - #3 in Fig. 2 to mobile stations); the device comprising:

an input device (see 200-Fig. 2) operable to be coupled to the at least one radio-transceiver (see Fig. 2) for receiving a handoff signal (generating a pilot signal for performing a hard hand-off ... The digital hardware MODEM for generating a pilot signal, refer to col. 2, lines 24-25 & 37-38) from the at least one radio-transceiver at a first mode respective to a first coverage area of the communication system (The first digital MODEM 200 produces an intermediate frequency which results in frequency #1, refer to col. 4, lines 55-56; and coverage areas of multiple frequencies, refer to col. 5, line 17. From col. 5, line 17 it implies that the frequency #1 covers first area);

an output device (see 530-Fig. 2) for delivering the handoff signal at a second mode (producing frequency #3 (which is utilized for generating a pilot signal), refer to col. 5, lines 11-13) respective to a second coverage area (coverage areas of multiple frequencies, refer to col. 5, line 17, and frequency #2, see col. 4, line 64 & lines 61-64. From col. 5, line 17 it can be seen that the frequency #2 covers second area, and frequency #3 is pilot signal for hand-off);

a converter (see 100 & 500 in Fig. 2) coupled to said input device and said output device (see Fig. 2. 100 is between 200 and 530) for translating the handoff signal from the first mode into the second mode (the IF amplifier/divider 100 coupled to the digital MODEM 200 (FIG. 2) transmits a first portion of the divided IF signal through the service RF path unit 500 for generating a frequency #1 (which is utilized for actual communication), and a second portion of the divided IF signal through the RF path unit

530 for producing frequency #3 (which is utilized for generating a pilot signal), refer to col. 5, lines 9-13; and A second digital MODEM 210, which is coupled to a service RF path unit 510, produces an intermediate frequency which results in a frequency #2 ... It is to be understood that the term "service RF path unit" used herein will refer to an RF path unit that is used solely for actual communication, whereas the term "RF path unit" will refer to an RF path unit that is used solely for transmission of a pilot signal, see col. 4, lines 61-64 & 65-67); the second mode handoff signal for indicating to a subscriber station operating in the second mode within both of the coverage areas to switch from the second mode to the first mode so that the subscriber station operates in the first mode (The digital MODEM 200 coupled to the IF amplifier/divider 100 transmits all signals converted by an overhead channel or traffic channel. Accordingly, the RF path unit 530 can balance coverage areas of multiple frequencies by transmitting both signals converted by an overhead channel and traffic channel, refer to col. 5, lines 14-17. It can be seen that the mobile switches from the second mode –frequency #2- to the first mode - frequency #1-).

For **claims 2, 11, 18, 31, and 37**, Han et al. teach the device wherein said first coverage area and said second coverage area of said system are each based on a respective protocol selected from the group consisting of CDMA, TDMA, GSM, GPRS, AMPS and FDMA (see col. 1, line 21. It is known that the method works with CDMA could work with TDMA etc. See col. 5, lines 47-55 of Jonsson, cited before as evidence).

For **claims 3, 12, 19, and 38**, Han et al. teach the device wherein said protocols respective to said coverage areas are different (coverage areas of multiple frequencies, refer to col. 5, line 17, From this paragraph, it can be seen that the coverage areas are different because the frequencies are different).

For **claims 4, 13, 20, and 39**, Han et al. teach a conventional CDMA re-direction signal (see col. 1, line 21).

For **claims 5 and 14**, Han et al. teach the device wherein said first coverage area and said second coverage area are served by respective CDMA base stations (see col. 1, lines 25-26).

For **claims 6, 15, 21, and 36**, Han et al. teach the device wherein said output device is operable to transmit said handoff signal to a base station power combiner for delivering said converted handoff signal to a base station antenna for outputting said handoff signal (see 430 in Fig. 2).

For **claims 7 and 22**, Han et al. teach the device wherein said converter comprises a down-converter (see divider 100 in Fig. 2) operable to receive said handoff signal from said input device and for converting said handoff signal from said first frequency to an intermediate frequency and an up-converter for converting said intermediate frequency to said second frequency (see 500 in Fig. 2, and a pilot signal generator ... to perform an inter-frequency hard hand-off operation ... comprises an intermediate frequency (IF) amplifier/divider; ... a service radio frequency (RF) path unit for up-converting a first portion of the divided signal into a radio frequency and transmitting the radio frequency, see col. 3, lines 28-38).

For **claims 8 and 23**, Han et al. teach the device further comprising a microcontroller operably connected to said down-converter and said up-converter such that said first frequency and said second frequency is user-selectable (it is known that an user and base station can exchange information, see Jonsson reference col. 8, lines 18-23 as evidence).

For **claims 9 and 24**, Han et al. teach the device wherein said microcontroller is further operable to perform at least one of logging various conversions performed by said converter (Official Notice is taken that the concept and advantage of that any information can be stored or logged are well known and expected in the art), and generating alarms if said converter operates outside of desired specifications (see col. 7, lines 1-5).

For **claim 16**, Han et al. teach the method further comprising receiving an input signal identifying at least one said frequencies for use in performing a reminder of the steps (see col. 1, lines 18-20 and 47-56).

For **claim 34**, it is a combination of claims 1, 4, and 7, therefore it is rejected for the same reason above.

For **claim 40**, Han et al. teach the base station according to claim 39 wherein said base station is a first CDMA base station and said second coverage area is served by a second CDMA base station different from said first CDMA base station (see col. 1, lines 14-16, and 25-26).

### ***Response to Arguments***

4. Applicant's arguments, filed 11/4/2008, have been fully considered, and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Han et al. (U.S. Patent 6,430,200 B1).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to WANDA Z. RUSSELL whose telephone number is (571)270-1796. The examiner can normally be reached on Monday-Thursday 9:00-6:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/644,932  
Art Unit: 2416

Page 8

/Kevin C. Harper/  
Primary Examiner, Art Unit 2416

WZR/Wanda Z Russell/  
Examiner, Art Unit 2416